

SAFETY DATA SHEET

Revision Date: 23/Mar/2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description: POLYLITE® 32124-12

Other means of identification

SAP ID(s): 5166; 5167; 183062

Material Code: 32124-12 **Chemical Family** Polyester Resin

Recommended use of the chemical and restrictions on use

Intended Use: Marble Resin

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Emergency Telephone Reichhold, Inc. E-mail address

Corporate Headquarters

P.O. Box 13582

Research Triangle Park, NC 27709

USA

Tel +1-919-990-7500 Fax +1-919-767-8602

2. HAZARDS IDENTIFICATION

(Chemtrec) 1-800-424-9300

prodsafety@reichhold.com

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Inhalation (Vapors) Category 4 Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2A Carcinogenicity Sub-category 1B Specific target organ toxicity (single exposure) Category 3 Specific target organ toxicity (repeated exposure) Category 1 Chronic aquatic toxicity Category 3 Flammable liquids Category 3

Label elements

Emergency Overview Statements

Danger

Hazard Statements

Harmful if inhaled

Causes skin irritation

Causes serious eve irritation

May cause cancer

May cause respiratory irritation

Causes damage to hearing through prolonged or repeated exposure if inhaled

Harmful to aquatic life with long lasting effects

Flammable liquid and vapor



Appearance Clear Light blue

Physical State Liquid

Odor Pungent

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Use only outdoors or in a well-ventilated area

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe mist, vapors, spray

Do not eat, drink or smoke when using this product

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Keep cool

Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to industrial incineration plant

Dispose of in accordance with federal, state and local regulations

Hazards not otherwise classified (HNOC)

Other Information

Unknown acute toxicity 70.0% of the mixture consists of ingredient(s) of unknown toxicity.

Unknown aquatic toxicity 70.1% of the mixture consists of components(s) of unknown hazards to the aquatic

environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%	Trade Secret
Polyester Resin	Proprietary	70.0	
Styrene	100-42-5	28.8	

If CAS number is "proprietary", the specific chemical identity has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Eye Contact Immediately flush eyes for at least 15 minutes. Get medical attention.

Skin Contact Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin

irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation Remove person to fresh air. If signs/symptoms continue, get medical attention. Keep

patient warm and at rest. If not breathing, give artificial respiration. If breathing is labored,

administer oxygen. Get medical attention immediately.

Ingestion Do not induce vomiting. Potential for aspiration if swallowed. This material may enter the

lungs during vomiting. Never give anything by mouth to an unconscious person. GET

IMMEDIATE MEDICAL ATTENTION.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and

No information available.

Effects

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO2), Foam, Dry chemical, Water spray

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous combustion products Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapors

and gases

Combustion/Explosion Hazards Flammable. Vapors may form explosive mixture with air. Flash back possible over

considerable distance. This material may polymerize (react) when its container is exposed to heat (as during a fire). This polymerization increases pressure inside a closed container and may result in the violent rupture of the container. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition

as the container may explode and may cause injury or death.

Protective Equipment and Precautions for Firefighters:

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Evacuate all persons from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished. Use water spray to cool fire-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Remove all sources of ignition. Evacuate personnel to safe areas. Avoid contact with skin

and eyes. Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Beware of vapors accumulating to form

explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate

ground water system. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste. Beware of vapors accumulating to form

explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for Containment Prevent spilled material from 1) contaminating soil, 2) entering sanitary sewers, storm

sewers, and drainage systems, and 3) entering bodies of water or ditches that lead to waterways. Prevent spreading over a wide area (e.g. by containment or oil barriers).

Methods for Clean-up Soak up with inert absorbent material. Remove from surface water (e.g. by skimming or

siphoning). Dispose of contaminated material as waste according to item 13.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Take off

contaminated clothing and wash before reuse. Ensure adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed. Do not use compressed air for filling, discharging or handling. Wash

hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Keep away from heat and sources of ignition. No smoking. Keep away from direct sunlight.

Keep containers tightly closed in a cool, well-ventilated place. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at

temperatures below 77°F (25°C).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

OSHA PEL

Components with workplace control parameters

Styrene (CAS #: 100-42-5)

ACGIH TLV

40 ppm STEL

A4 Not Classifiable as a Human Carcinogen

100 ppm TWA 200 ppm Ceiling

20 ppm TWA

Industry PEL While the federal workplace exposure limit for styrene is 100

ppm, OSHA accepted the styrene industry's proposal to

voluntarily meet a PEL of 50 ppm on an 8 hour TWA and a Short Term Exposure Limit (STEL) of 100 ppm, 15 minute exposure.

Canada - Alberta OELs 40 ppm STEL

170 mg/m³ STEL 20 ppm TWA 85 mg/m³ TWA 35 ppm TWA

Canada - Ontario OELs

100 ppm STEL 50 ppm TWA

Canada - British Columbia OELs

75 ppm STEL

NIOSH IDLH

700 ppm Immediately dangerous to life or health IDLH

Mexico OEL 100 ppm STEL

425 mg/m3 STEL 50 ppm TWA 215 mg/m3 TWA

(skin)

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

TLV® (Threshold Limit Value) TWA (time-weighted average)

STEL - Short Term Exposure Limit

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit OEL - Occupational Exposure Limit

NIOSH - National Institute for Occupational Safety and Health

IDLH - Immediately Dangerous to Life or Health

SKIN: Skin Absorption

Appropriate engineering controls

Use general ventilation to maintain airborne concentrations to levels that are below **Engineering Controls**

regulatory and recommended occupational exposure limits. Local ventilation may be

required during certain operations. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Safety glasses with side-shields. If splashes are likely to occur:. Tight sealing safety **Eye/face Protection**

goggles. Ensure that eyewash stations and safety showers are close to the workstation

location.

Wear protective nitrile rubber or Viton™ gloves. Gloves made of nitrile rubber or polyvinyl Skin Protection

chloride (PVC) may be used for splash protection and brief or intermittent contact with styrenated polyester resin. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the

danger of cuts, abrasion. Impervious clothing. Rubber or plastic boots.

Respiratory Protection None required if hazards have been assessed and airborne concentrations are maintained

below the exposure limits listed in Section 8. Wear an approved air-purifying respirator with organic vapor cartridges and particulate filters where airborne concentrations may exceed exposure limits in Section 8 and/or there is exposure to dust or mists due to sanding, grinding, cutting, or spraying. Use an approved positive-pressure air-supplied respirator with emergency escape provisions if there is any potential for an uncontrolled release, airborne concentrations are not known, or any other circumstances where air-purifying

respirators may not provide adequate protection

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Clear Light blue **Appearance** Odor Pungent **Odor Threshold** 0.2 ppm (Styrene)

Liquid

Physical State

pН Not applicable

Flash Point 33 °C / 89 °F
Flash Point Method: Seta closed cup

Autoignition Temperature490°C / 914°F (Styrene)Boiling point / boiling range146°C / 295°F (Styrene)Melting point / Freezing pointNo information available

Flammability Limit in Air

 Lower
 1.1% (Styrene)

 Upper
 6.1% (Styrene)

 Specific Gravity
 1.11 - 1.15 @ 25°C

 Solubility
 Insoluble (Water)

Evaporation Rate0.49 (BuAc = 1) (Styrene)Vapor Pressure5 mmHg @ 20°C (Styrene)6.7 hPa (Styrene)

Vapor Density3.6 (Air = 1) (Styrene)Explosive PropertiesNo information availableOxidizing PropertiesNo information availablePercent Volatile, wt.%28 - 32 % by weight

VOC Content: 344 g/l (calculated) product as supplied

Viscosity1600 - 1800 cps @ 25°CPartition Coefficient (n-octanol/water)No information availableDecomposition temperatureNo information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Stable under normal conditions. Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization Polymerization can occur. Hazardous polymerization will occur if contaminated with

peroxides, metal salts and polymerization catalysts. Hazardous polymerization may occur upon depletion of inhibitor - may cause heat and pressure build-up in closed containers. Product will undergo hazardous polymerization at temperatures above 150 F (65 C).

Conditions to Avoid

Heat, flames and sparks. Contamination by those materials referred to under Incompatible materials. Unstable upon depletion of inhibitor. Elevated temperatures.

Incompatible materials

Strong acids. Strong oxidizing agents. Metal salts. Polymerization catalysts.

Hazardous Decomposition Products

Hydrocarbons. Carbon monoxide. Carbon dioxide (CO2). Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Primary Routes of Entry Eye contact, Ingestion, Inhalation, Skin Contact, Skin absorption

Acute toxicity
Styrene

 Oral LD50
 = 5000 mg/kg (Rat)

 Dermal LD50
 > 2000 mg/kg (Rat)

 Inhalation LC50
 = 11.8 mg/l (4 H) (Rat)

Information on toxicological effects

Symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Eyes Irritating to eyes.

Skin Harmful by skin absorption. Contact causes skin irritation. Prolonged skin contact may defat

the skin and produce dermatitis.

Inhalation Harmful by inhalation. May cause irritation of respiratory tract. Inhalation of high vapor

concentrations can cause CNS-depression and narcosis.

Ingestion Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. Ingestion is

not an anticipated route of exposure for this material in industrial use.

Sensitization Not sensitizing.

Repeated dose toxicity In humans, styrene may cause a transient decrease in color discrimination and effects on

hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled. May cause damage to the kidneys, liver, eyes, brain, respiratory system, central nervous system

through prolonged or repeated exposure if inhaled.

Mutagenic effects Styrene has given mixed positive and negative results in a number of mutagenicity tests.

Styrene was not mutagenic without metabolic activation but gave negative and positive

mutagenic results with metabolic activation.

Carcinogenicity .

<u>Styrene</u>

ACGIH
IARC
Group A4 - Not classifiable as a human carcinogen.
Group 2B - Possibly Carcinogenic to Humans
NTP
Reasonably anticipated to be human carcinogen

Legend IARC - International Agency for Research on Cancer

NTP - National Toxicology Program

Reproductive Toxicity No information available.

Neurological Effects No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Target organ(s) Liver, Central nervous system (CNS), Respiratory system, Kidney.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 70.0% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 5194 mg/kg ATEmix (dermal) 2078 mg/kg ATEmix (inhalation-vapor) 12.3 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Styrene

Log Kow 2.95 Bioconcentration factor (BCF) 74

Algae EC50 = 1.4 mg/L (Pseudokirchneriella subcapitata) (72h)

EC50 0.46 - 4.3 mg/L (Pseudokirchneriella subcapitata) (72h)

Fish LC50 3.24 - 4.99 mg/L (Pimephales promelas) (96 h) flow-through LC50 19.03 - 33.53 mg/L (Lepomis macrochirus) (96 h) static

LC50 6.75 - 14.5 mg/L (Pimephales promelas) (96 h) static LC50 58.75 - 95.32 mg/L (Poecilia reticulata) (96 h) static

Water Flea EC50 3.3 - 7.4 mg/L 48 h

Unknown aquatic toxicity

70.1% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal ConsiderationsHazardous waste. Can be incinerated, when in compliance with local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number D001 (IGNITABLE): When discarded in its purchased form, this material would be regulated

under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic

of ignitability.

14. TRANSPORT INFORMATION

DOT

________________________UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group III
NAERG: 127

<u>TDG</u>

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class CLASS 3
Packing Group PG III
NAERG: 127

MEX

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class CLASS 3
Packing Group PG III
NAERG: 127

IATA

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group III
Packing Instructions 355, 366

NAERG: 127

IMDG/IMO

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class CLASS 3
Packing Group PG III
EmS-No F-E, S-E
NAERG: 127

15. REGULATORY INFORMATION

International Inventories

TSCA Inventory Status: All components of this material are listed on or are exempt from the US Toxic Substances

Control Act (TSCA) inventory

Canadian Inventory Status: This material contains a component(s) that is listed on the Canadian Non-Domestic

Substances List (NDSL)

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory

of Chemical Substances

Korean Inventory Status: This product contains only chemicals which are currently listed on the Korean Chemical

Substances List

Philippine Inventory: All components of this material are listed on or are exempt from the Philippine Inventory of

Chemicals and Chemical Substances

Japan ENCS: This product contains only chemicals that are currently listed on the Japanese Inventory of

Existing and New Chemical Substances

Chinese IECS: This product contains only chemicals that are currently listed on the Chinese Inventory of

Existing Chemical Substances

New Zealand Inventory: This product contains one or more chemicals currently not on the New Zealand Inventory of

Chemicals

Taiwan Existing Chemical Substances Inventory:

Not Determined

US Federal Regulations

TSCA 12(b) - Export Notification:

This material does not contain any components that are subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Notification requirements.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS No	Weight-%	SARA 313 Status
Styrene	100-42-5	28.8	Listed

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes Chronic Health Hazard Yes

Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard Yes

Clean Water Act

This product contains the following listed substances:

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Styrene 100-42-5	1000 lb			Listed

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Component	CAS No	Weight-%	HAPS data
Styrene	100-42-5	28.8	

CERCLA

This product contains the following reportable quantities:

Component	40 CFR 302.4 RQ	40 CFR 355 EHS TPQs
Styrene	1000 lb	
	454 kg	

Chemical Weapons Convention (CWC)

This product does not contain any listed substances.

State Regulations

California Proposition 65

WARNING: This material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. The California Safe Drinking Water and Toxic Enforcement Act of 1986 requires that clear and reasonable warning be given prior to exposing any person to this chemical.

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

NFPA Rating Health 2 Flammability 3 Instability 1

Prepared By Reichhold Product Regulatory Department

Phone Number: 919-990-7500

Revision Date: 23/Mar/2015

Revision Summary: This data sheet contains changes from the previous version in section(s):

1, 2, 3, 4, 5, 8, 9, 11, 12, 14, 15

Former date: 14 January 2008

This information is provided in good faith and is correct to the best of Reichhold's knowledge as of the date hereof and is designed to assist our customers; however, Reichhold makes no representation as to its completeness or accuracy. Our products are intended for sale to industrial and commercial customers. We require customers to inspect and test our products before use and to satisfy themselves as to suitability for their specific applications. Any use which Reichhold customers or third parties make of this information, or any reliance on, or decisions made based upon it, are the responsibility of such customer or third party. Reichhold disclaims responsibility for damages, or liability, of any kind resulting from the use of this information. THERE ARE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THIS INFORMATION OR TO THE PRODUCT IT DESCRIBES. IN NO EVENT SHALL REICHHOLD BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

End of Material Safety Data Sheet

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